This report contains very important information about your drinking water. Please translate it, or speak with someone who understands it.

Si usted desea obtener una copia de este reporte en español, llame al teléfono 617-788-1190.

La relazione contiene importanti informazioni sulla qualità dell’acqua della Comunità. Tra-durlo o parlarne con un amico che lo comprenda.

O relatório contém informações importantes sobre a qualidade da água da comunidade. Traduza-o ou peça a alguém que o ajude a entendê-lo melhor.

Where To Go For Further Information

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Massachusetts Water Resources Authority (MWRA)
Massachusetts Dept. of Environmental Protection
Department of Conservation and Recreation
Massachusetts Dept. of Public Health (DPH)
US Centers for Disease Control & Prevention (CDC)
List of State Certified Water Quality Testing Labs
Source Water Assessment and Protection Reports
Information on Water Conservation

Public Meetings
MWRA Board of Directors
MWRA Advisory Board
Water Supply Citizens Advisory Committee

This report is required under the Federal Safe Drinking Water Act. MWRA PWS ID# 6000000
Dear Customer,

I am pleased to share with you the results of our water quality testing. MWRA takes hundreds of thousands of tests each year, and for 2013, we again met every federal and state drinking water standard. System-wide, we have been below the Lead Action Level for the past ten years. Please read your community’s letter on page 4 for more information on your local water system.

The big news this year is that we have completed the start-up of a new ultraviolet (UV) disinfection facility at the John J. Carroll Water Treatment Plant in Marlborough, improving the quality of the drinking water we deliver to you. UV light is essentially a more potent form of natural disinfection from sunlight. UV enables MWRA to inactivate the most difficult to kill pathogens - which could potentially be in the source water - without the use of additional chemicals or any associated disinfection by-products. The UV process and MWRA’s high quality source water allow MWRA to meet new regulatory requirements cost effectively.

Since 2005, your water has been treated with ozone - produced by applying an electrical current to pure oxygen. Ozone provides a high level of protection against microbes and viruses, improves water clarity, and has actually made the water taste better. The addition of UV to the ozone process provides additional assurance that any pathogens potentially in our reservoirs will be rendered harmless.

In addition, fluoride is added to promote dental health and the water chemistry is adjusted to reduce corrosion of lead and copper from home plumbing. Last, we add monochloramine, a mild and long-lasting disinfectant combining chlorine and ammonia to protect the water as it travels through miles of pipelines to your home.

In a few short years, water treatment has gone from chlorine with its taste and odor issues, to ozone and now ultraviolet light— with no additional chemicals and no disinfection by-products. Just better, safer water.

Your local water supply may have different treatment. Please see page 4 for more information.

I hope you will take a few moments to read this report. We want you to have the same confidence we have in the water we deliver to over 2 million customers. Please contact us if you have any questions or comments about your water quality, or any of MWRA’s programs.

Sincerely,

Frederick A. Laskey
Executive Director

MWRA BOARD
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John J. Carroll,
Vice-Chair
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MWRA Water System

LEGEND
Storage Tanks
Hydro

Quabbin Reservoir
War River Watershed
Wachusett Reservoir
Hallow Aqueduct
MetroWest Tunnel
Carroll Water Treatment Plant and Storage
Quabbin Treatment Plant
War River Watershed
Hallow Aqueduct
MetroWest Tunnel
Carroll Water Treatment Plant and Storage
Quabbin Treatment Plant
Where Does Your Water Come From?

Your water comes from the Quabbin Reservoir, about 65 miles west of Boston, and the Wachusett Reservoir, about 35 miles west of Boston. These reservoirs supply wholesale water to local water departments in 51 communities. The two reservoirs combined supplied about 200 million gallons a day of high quality water to consumers in 2013. Your water also comes from local water supplies. Please see page 4 for more information.

The Quabbin and Wachusett watersheds are naturally protected with over 85% of the watersheds covered in forest and wetlands. To ensure safety, the streams and reservoirs are tested often and patrolled daily by the Department of Conservation and Recreation (DCR).

Rain and snow falling on the watersheds - protected land around the reservoirs - turn into streams that flow to the reservoirs. This water comes in contact with soil, rock, plants, and other matter as it follows its natural path to the reservoirs. While this process helps to clean the water, it can also dissolve and carry very small amounts of material into the reservoir. Minerals from soil and rock do not typically cause problems in the water. But, water can also transport contaminants from human and animal activity. These can include bacteria and viruses - some of which can cause illness. The test data in this report show that these contaminants are not a problem in your reservoirs’ watersheds.

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program report for the Quabbin and Wachusett Reservoirs. The DEP report commends DCR and MWRA on the existing source protection plans, and states that our “watershed protection programs are very successful and greatly reduce the actual risk of contamination.” MWRA follows the report recommendations to maintain the pristine watershed areas using existing watershed plans. Your water also comes from local supplies that have a separate report.

Test Results – After Treatment

EPA and state regulations require many water quality tests after treatment to check the water you are drinking. MWRA conducts hundreds of thousands of tests per year on over 120 contaminants (a complete list is available on www.mwra.com). For results on your local water supply, please see page 4. Details about 2013 test results are in the table below. The bottom line is that water quality is excellent.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Units</th>
<th>(MCL) Highest Level Allowed</th>
<th>(We found) Detected Level-Average</th>
<th>Range of Detections</th>
<th>(MCLG) Ideal Goal</th>
<th>Violation</th>
<th>How it gets in the water</th>
<th>How it gets in the water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>ppm</td>
<td>2</td>
<td>0.008</td>
<td>0.007-0.009</td>
<td>2</td>
<td>No</td>
<td>Common mineral in nature</td>
<td></td>
</tr>
<tr>
<td>Monochloramine</td>
<td>ppm</td>
<td>4-MRDL</td>
<td>1.8</td>
<td>0.01-4</td>
<td>4-MRDL</td>
<td>No</td>
<td>Water disinfectant</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>ppm</td>
<td>4</td>
<td>1.04</td>
<td>0.37-1.1</td>
<td>4</td>
<td>No</td>
<td>Additive for dental health</td>
<td></td>
</tr>
<tr>
<td>Nitrate^</td>
<td>ppm</td>
<td>10</td>
<td>0.08</td>
<td>0.01-0.08</td>
<td>10</td>
<td>No</td>
<td>Atmospheric deposition</td>
<td></td>
</tr>
<tr>
<td>Nitrite^</td>
<td>ppm</td>
<td>1</td>
<td>0.005</td>
<td>ND-0.005</td>
<td>1</td>
<td>No</td>
<td>Byproduct of water disinfection</td>
<td></td>
</tr>
<tr>
<td>Total Trihalomethanes</td>
<td>ppb</td>
<td>80</td>
<td>10.1</td>
<td>3.0-13.9</td>
<td>ns</td>
<td>No</td>
<td>Byproduct of water disinfection</td>
<td></td>
</tr>
<tr>
<td>Haloacetic Acids-5</td>
<td>ppb</td>
<td>60</td>
<td>9.0</td>
<td>1.4-13.2</td>
<td>ns</td>
<td>No</td>
<td>Byproduct of water disinfection</td>
<td></td>
</tr>
<tr>
<td>Total Coliform</td>
<td>%</td>
<td>5%</td>
<td>0.5% (Nov)</td>
<td>ND-0.5%</td>
<td>0</td>
<td>No</td>
<td>Naturally present in environment</td>
<td></td>
</tr>
</tbody>
</table>

KEY: MCL=Maximum Contaminant Level. The highest level of a contaminant allowed in water. MCLs are set as close to the MCLGs as feasible using the best available technology. MCLG=Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. MRDL=Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination. ppm=parts per million ppb=parts per billion ns=no standard

^As required by DEP, the maximum result is reported for nitrate and nitrite, not the average.

Sodium Facts

Sodium in water contributes only a small fraction of a person's overall sodium intake (less than 10%). MWRA tests for sodium monthly and the highest level found was 35.9 mg/L (about 9 mg per 8 oz. glass). This would be considered Very Low Sodium by the Food and Drug Administration.
Your Tap Water – Award Winning and Affordable!

In 2013, we won New England’s Best-Tasting water award from the New England Water Works Association and the National Sustainability Award from the American Council for an Energy-Efficient Economy. Great tasting, green, and also cheap! Tap water costs less than a penny per gallon delivered straight to your home, while bottled water can cost from $1 to $8 a gallon.

Make the smart choice and drink tap water.

Contaminants in Bottled Water and Tap Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (1-800-426-4791) or MWRA. In order to ensure that tap water is safe to drink, the Massachusetts DEP and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Information About Cross Connections

Massachusetts DEP recommends the installation of backflow prevention devices for inside and outside hose connections to help protect the water in your home as well as the drinking water system in your town. For more information on cross connections, please call 617-242-5352 or visit www.mwra.com/crosscon.html.

Research for New Regulations

MWRA has been working with EPA and other researchers to define new national drinking water standards by testing for unregulated contaminants. To read more about this testing, and to see a listing of what was found, please visit www.mwra.com/UCMR/2013.html.

Tests in Community Pipes

MWRA and local water departments test 300 to 500 water samples each week for total coliform bacteria. Total coliform bacteria can come from the intestines of warm-blooded animals, or can be found in soil, plants, or other places. Most of the time, they are not harmful. However, their presence could signal that harmful bacteria from fecal waste may be there as well. The EPA requires that no more than 5% of the samples in a month may be positive. If a water sample does test positive, we run more specific tests for E.coli, which is a bacteria found in human and animal fecal waste and may cause illness. If your community found any total coliform, it will be listed within the community letter on page 4.

Drinking Water and People with Weakened Immune Systems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA’s Safe Drinking Water Hotline (1-800-426-4791).

Drinking Local and Be Green

Tap water is delivered straight to your home without trucking or plastic waste. Bottled water produces over 10,000 times the amount of greenhouse gases compared to tap water. Half of our energy needs for water and wastewater treatment are met with green power including hydro-energy, wind turbines, and solar panels.

Drink local! Drink tap water! Be green!

UV treatment units

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Make the smart choice and drink tap water.
Dear Northborough Water Customer,

Northborough (PWS# 2215000) is a partner with other MWRA communities in providing our water users with the Annual Water Quality Report produced by the MWRA. For calendar year 2013, 100% of Northborough’s water was delivered from the MWRA system.

After pumping the water from MWRA, Northborough is responsible for delivering the water to our customers. The Water Division maintains approximately 63 miles of distribution pipeline, over 575 fire hydrants and manages 4,115 accounts. In 2013, the Town of Northborough’s Water Division distributed 322 million gallons of water to our customers. As part of the routine maintenance program, the system is flushed to remove sediment. Additionally, leak detection is performed annually.

Improvements
The Town of Northborough is working with an engineering consultant to complete a system-wide water master plan. This plan focuses on the water system’s ability to provide the Town with the most cost effective method of delivering safe, clean potable water to its residents. The study includes reviewing sustainable sources of water supply as well as evaluating the current distribution model, calibrating the model, calculating storage and system operating pressures as well as performing a water audit (mass balance of volume purchased versus volume billed). The analysis also includes a water and sewer rate study so the Town is able to comprehensively evaluate tiered rate structures and the effects various capital improvement project costs will have on these rates.

Cross Connection
Northborough has an ongoing program to eliminate possible cross connections from the distribution system. In a typical water supply system, pressure is maintained to adequately enable water to flow to the tap, shower head, etc. When pressure drops within the system (due to a water main break, fire demand, etc.) the pipe may allow contaminated water from the ground, from storage or from other sources within your house (hose, irrigation, pool, etc.) to be drawn back into the system.

In accordance with Town regulations irrigation systems are not allowed to connect to the Municipal water system. All irrigation systems must be connected to private wells. Any homeowner who has a well for irrigation must have it inspected by the Water Division to ensure that there is no cross connection between the municipal water system and the irrigation system. Cross Connection Control information is available on the Town’s website (www.town.northborough.ma.us).

Water Analysis
The Town of Northborough and MWRA continue to analyze water samples on a routine basis and have consistently met all standards.

Lead & Copper Results
Northborough has conducted lead and copper testing and found that the action levels for both lead (15 ppb) and copper (1.3 ppm) have been met and we were able to reduce our sampling frequency to once a year. The 90th percentile sample levels for 2013 are 1.8 ppb for Lead and 0.128 ppm for Copper.

Conclusion
The Northborough Public Works Department, through its Water Division, continues its commitment to provide its customers with safe, high quality potable water. If you have any questions or want more information please contact the Public Works Administrative Offices, 63 Main Street, at 508-393-5030.

PUBLIC WORKS DEPARTMENT
Water, Wastewater, Highway, Cemetery & Parks Divisions
Daniel F. Nason, Director
Important Information from EPA about Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. MWRA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater/lead.

MWRA Meets Lead Standard in 2013

Under EPA rules, each year MWRA and your local water department must test tap water in a sample of homes that are likely to have high lead levels. These are usually homes with lead service lines or lead solder. The EPA rule requires that 9 out of 10, or 90%, of the sampled homes must have lead levels below the Action Level of 15 parts per billion (ppb).

All 18 sampling rounds over the past ten years have been below the EPA standard. Results for the 452 samples taken in September 2013 are shown in the table. 9 out of 10 houses were below 6.3 ppb, which is below the Action Level of 15 ppb. For lead and copper results for your local water supply, see page 4.

### 90th Percentile Lead Levels for MWRA Communities 2004-2013 (ppb)

<table>
<thead>
<tr>
<th>Year</th>
<th>Lead (ppb)</th>
<th>Copper (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>0-46.9</td>
<td>0-0.3</td>
</tr>
<tr>
<td>2005</td>
<td>0-6.3</td>
<td>0-0.1</td>
</tr>
<tr>
<td>2006</td>
<td>0-1.3</td>
<td>0-0.3</td>
</tr>
<tr>
<td>2007</td>
<td>0-6.3</td>
<td>0-0.1</td>
</tr>
<tr>
<td>2008</td>
<td>0-6.3</td>
<td>0-0.1</td>
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### How do I reduce my exposure to lead in drinking water?

- **Run the tap until after the water feels cold.** To save water, fill a pitcher with fresh water and place in the refrigerator for future use.
- **Never use hot water from the faucet for drinking or cooking, especially when making baby formula or other food for infants.**
- **Ask your local water department if there are lead service lines leading to your home.**
- **Check your plumbing fixtures to see if they are lead-free. Read the labels closely.**
- **Test your tap water.** Call the MWRA Drinking Water Hotline (617-242-5323) or visit our website for more tips and a list of DEP certified labs that can test your water.
- **Be careful of places you may find lead in or near your home. Paint, soil, dust and some pottery may contain lead.**
- **Call the Department of Public Health at 1-800-532-9571 or EPA at 1-800-424-LEAD for health information.**

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